

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/019,507	CACHINA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ishwar (I. B.) Patel	2827	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to papers filed on 3/29/02 and interview summary.
2. ☒ The allowed claim(s) is/are 1-32.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 0804.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date <u>12/21/2001</u></li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date <u>0804</u></li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____.</li> </ol> |
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### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Edward J. Ellis (Reg. 40,389) on August 19, 2004.

The application has been amended as follows:

[A]

Claim 7:

(Currently Amended) A solder-bearing wafer for use with a through hole device, the wafer comprising:

a substrate body having a first surface and an opposing second surface;

a plurality of first openings formed through the substrate body for receiving first electrical contacts of a first electronic device; and

a plurality of segments of solder material coupled to the first surface of the substrate body, each first opening having one or more solder segments disposed thereabout for forming a solder connection between the first electrical contacts of the first electronic device and the through hole device when the solder segments are heated and

a plurality of grooves formed in the first surface of the substrate body, each groove having a cross-section which is complementary to a cross-section of the solder segment so that each solder segment is securely and intimately fitted within one groove.

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Claim 23:

(Currently Amended) A solder-bearing wafer for use in electrically connecting at least one first contact of a first electronic device to at least one second contact of a second electronic device, the wafer comprising: a substrate body having a first surface and an opposing second surface; and

at least one segment of solder material retainingly disposed within a solder opening formed in the substrate body, the at least one solder segment being accessible from both the first and second surfaces of the substrate body, the substrate body for positioning between the first

and second electronic devices such that the at least one solder segment provides a soldered electrical connection between the at least one first contact and the least one second contact upon heating of the at least one solder segment; and

a plurality of through holes formed in the substrate body, each solder opening extending between two spatial through holes such that the solder opening opens into each of the through holes.

Claim 10: Cancel.

Claim 25: Cancel.

[B] Add new abstract:

A solder bearing-bearing wafer (100) is provided which is used to connect a first electronic device to a second electronic device. The wafer includes a substrate body having a first surface and second surface, opposing the first surface. The first surface has grooves (115, 117) formed therein and includes length of solder (130) dispersed within groove. Upon heating the solder and placement of the wafer between the first and second devices, the two devices are connected.

[C]

Few of the figures submitted with the application are hand drawn informal sketches.

Applicant to submit new formal drawings.

2. The following is an examiner's statement of reasons for allowance: The claimed invention comprises a solder-bearing wafer structure comprising a substrate body having a first surface and an opposing second surface, the first surface having at least one groove formed therein, wherein at least one length of solder material is disposed (claims 1-22 and 29-32), at least a at least one segment of solder material retainingly disposed within a solder opening formed in the substrate body, at least one solder segment accessible from both the first and second surfaces of the surface body, with a plurality of through holes formed in the substrate body, each solder opening extending between two spaced through holes such that the solder opening opens into each of the through holes (claims 23-28). This structure is not disclosed by the prior art of record. The nearest art located by the examiner is US Patent No. 5,986,338 to Nakajima, disclosing through hole in a substrate filled with solder material.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

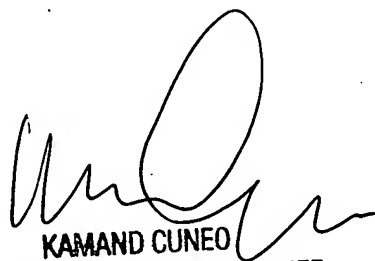
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ishwar (I. B.) Patel whose telephone number is (571) 272 1933. The examiner can normally be reached on M-F (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (571) 272 1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

I B Patel  
Examiner  
GAU: 2841  
August 20, 2004



KAMAND CUNEO  
SUPERVISORY PATENT EXAMINER  
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